

Metropolitan Sewerage District of Buncombe County

Asheville, North Carolina



Presentation to:

Legislative Research Committee

January 23, 2012



Table of Contents

1. Introduction of MSD Representatives
 2. System Overview
 3. Best Management Practices
 4. MSD Organization
 5. MSD Operations
 6. Capital Improvement Program
 7. Financial Overview of the District
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1. Introduction of MSD Representatives



Representatives for Metropolitan Sewerage District of Buncombe County (“MSD”)

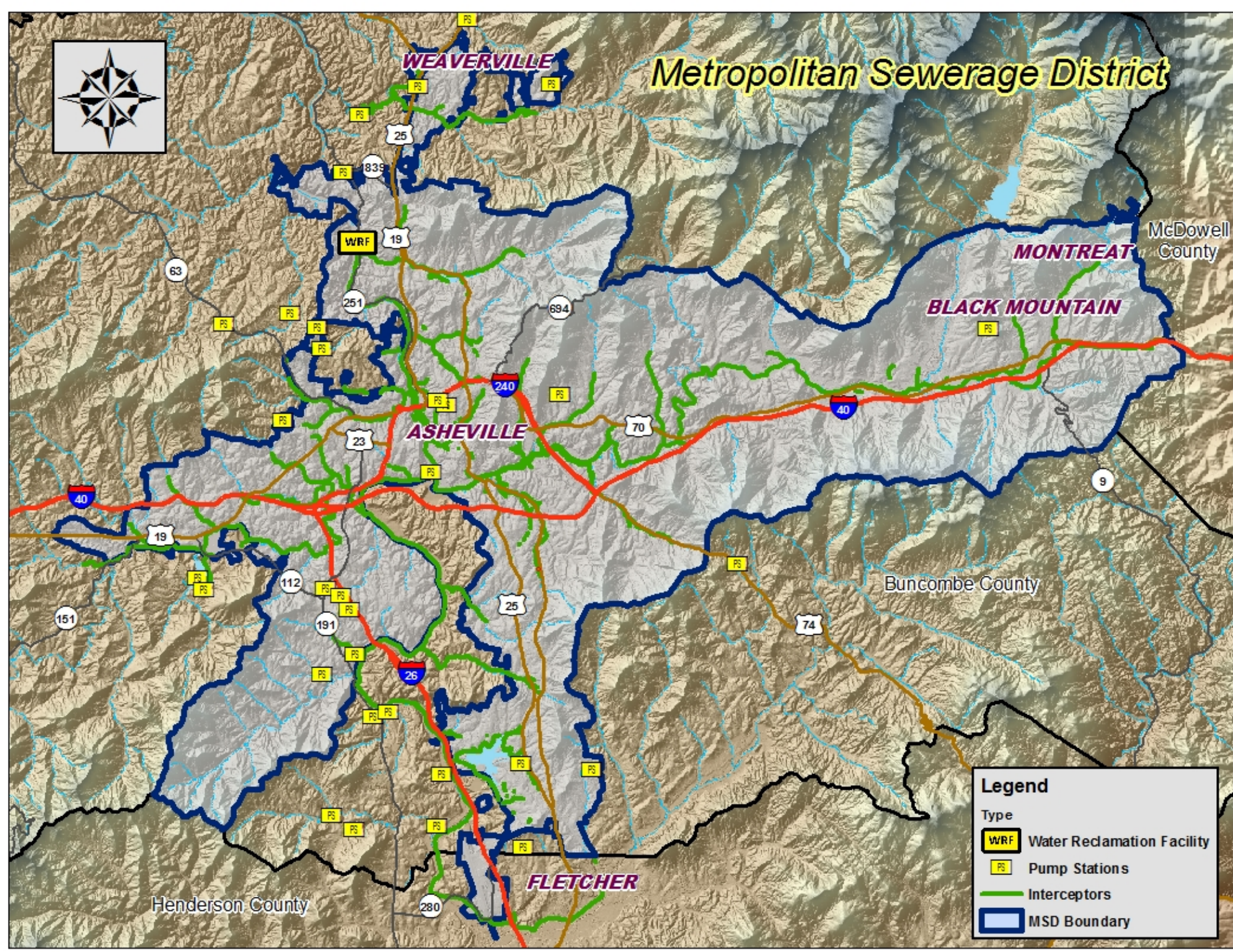
- Steven T. Aceto, Chairman of the Board
 - Robert Watts, Board Member
 - Gary McGill, P.E., Engineer of Record
 - William Clarke, General Counsel
 - Thomas Hartye, P.E., General Manager
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2. System Overview



Metropolitan Sewerage District





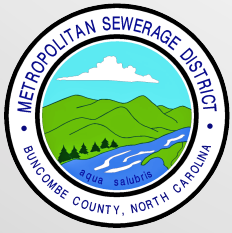
System Overview

- The MSD service area includes Asheville, Biltmore Forest, Black Mountain, Montreat, Woodfin, Weaverville, the unincorporated parts of Buncombe County. MSD has an agreement for wastewater treatment services for part of Henderson County.
- The MSD service area is over 180 square miles.
- Over 51,000 Customer Accounts
- In 1990 MSD took over Member Agency collection systems and have since spent \$243 Million in replacing over 781,000 feet of sewer mains (over 20% of Original System).



Marked Improvement in Collection System Sanitary Sewer Overflows





Collection System



- Over 970 miles of sewer mains
- 30 pump stations
- Over 29,000 manholes
- 180 square mile service area (Over 80% of the Population of Buncombe County)
- Preventative maintenance cleaning and CCTV 15% - 20% of system per year
- Rehabilitation/replacement of approximately 250,000 feet of sewers in the next five years



Customer Service Response

The MSD service area is over 180 square miles.

- MSD created a First Response Team to cut down in response time to customer calls and system emergencies.
- MSD tracks both response times and the time spent on each job.
- In FY 2011 the average response time of 36 minutes to customer service requests during regular working hours.
- During this same time period the average response time was 38 minutes to customer service requests after hours with the Night First Responder and Night Crew.



Comparative Monthly Residential Bills (NACWA - 2008)

2008 NACWA Financial Survey

April 22, 2009

EPA Region IV - Southeast

Residential - Single Family Homes

Industry

Ranking	Agency Name	Rate Design Gallons Per Year	Rate Design CCF's per month	Volume Rate per CCF	Average Annual Sewer Charge	Average Monthly Sewer Charge	Residential Connection Fee	Residential Facility / Hookup Fee	Industrial Volume Rate per CCF	BOD Rate per lb	BOD Limit	TSS Rate per lb	TSS Limit
20	Western Carolina RSA, SC	120,000	13.4	\$3.10	\$588	\$49.00			\$3.10	0.153	250	0.153	250
19	Orange County Utilities, FL	127,750	14.2	\$2.37	\$548	\$45.66		\$3,668	\$2.37	0.469	300	0.500	300
18	Beaufort Jasper WSA, SC	84,000	9.4	\$3.96	\$504	\$42.00	\$2,760	\$500		0.350	250	0.600	250
17	City of Augusta UD, GA	98,550	11.0	\$1.26	\$461	\$38.40	\$350		\$2.00	0.330	200	0.330	200
16	MWS, Nashville & Davidson Cnty, TN	73,000	8.2	\$3.76	\$434	\$36.13	\$2,000		\$3.43	0.273	300	0.140	325
15	Charlotte Mecklenburg Util, NC	98,736	11.0	\$2.98	\$415	\$34.58	\$1,886	\$1,190	\$0.30			0.100	
14	City of St. Petersburg, FL	67,200	7.5	\$2.66	\$406	\$33.86	\$350		\$0.10	0.090			
13	Orange WSA, NC	72,000	8.0	\$3.11	\$398	\$33.20	\$318	\$3,001	\$3.11	0.280	205	0.340	235
12	Sanitation District #1, KY	89,760	10.0	\$3.18	\$366	\$30.48	\$2,490		\$3.18	0.274		0.115	
11	Alexandria Sanitation Auth., VA	60,550	6.7	\$4.03	\$361	\$30.10			\$4.03				
10	Louisville/Jefferson MSD, KY	72,000	8.0	\$1.65	\$338	\$28.14			\$1.11	0.249	250	0.103	270
9	Columbus Water Works, GA	89,760	10.0	\$2.32	\$300	\$25.00	\$20		\$1.98	0.100	300	0.100	300
8	Mount Pleasant Waterworks, SC	60,000	6.7	\$2.39	\$291	\$24.29	\$550	\$2,000	\$2.77				
7	MSD of Buncombe County, NC	44,880	5.0	\$3.41	\$279	\$23.28	\$600	\$1,600	\$1.83	0.394	150	0.285	150
6	Miami-Dade County WSD, FL	81,000	9.0	\$1.38	\$270	\$22.50	\$487		\$1.46	0.190		0.140	
5	Fairfax County WWMP, VA	76,000	8.5	\$2.62	\$266	\$22.17	\$600	\$6,138	\$2.62				
4	Mobile Area WSS, AL	30,000	3.3	\$3.19	\$261	\$21.73			\$3.19	0.230	280	0.250	250
3	Macon Water Authority, GA	62,832	7.0	\$3.72	\$191	\$15.92			\$1.56	0.100	250	0.100	250
2	Chesterfield County Util., VA	80,784	9.0	\$1.31	\$131	\$10.90	\$812	\$2,370	\$1.31	0.230	250	0.130	250
1	City of Memphis, DPW, TN	89,760	10.0	\$0.65	\$80	\$6.70	\$240		\$0.65	0.037	250	0.060	300
Minimum		30,000	3	\$0.65	\$80	\$6.70	\$20	\$500	\$0.10	0.037	150	0.060	150
Maximum		127,750	14	\$4.03	\$588	\$49.00	\$2,760	\$6,138	\$4.03	0.469	300	0.600	325
Average		78,928	9	\$2.65	\$344	\$28.70	\$962	\$2,558	\$2.11	0.234	249	0.215	256
Median		78,392	9	\$2.82	\$349	\$29.12	\$575	\$2,185	\$2.00	0.240	250	0.140	250

Note: Average monthly consumption within MSD is 5 CCF as compared to the national average of 9.9 CCF



3. Best Management Practices (BMP)



Comprehensive Long Term Planning

- Collection System Master Plan and Treatment Plant Facilities Plan guide MSD in developing its 10 year Capital Improvement Plan (CIP).
- The Master Plan is updated to reflect member agency planning efforts and development trends.
- The 10 year Financial Forecast serves as a business plan to provide funding for operations, debt and for the aggressive 10 year CIP.





Future Growth Potential System Capacity

- Currently using about 18 MGD of 40 MGD capacity at the Treatment Plant.
- MSD's aggressive program of rehabilitation and replacement of existing lines include upgrades of lines sizes to provide for future growth.
- The MSD Collection System Master Plan has mapped out all the lines necessary for serve areas that are identified by our Member Agencies for future growth.





Capital Improvement Program

Strategic Focus on Assets & Maintenance

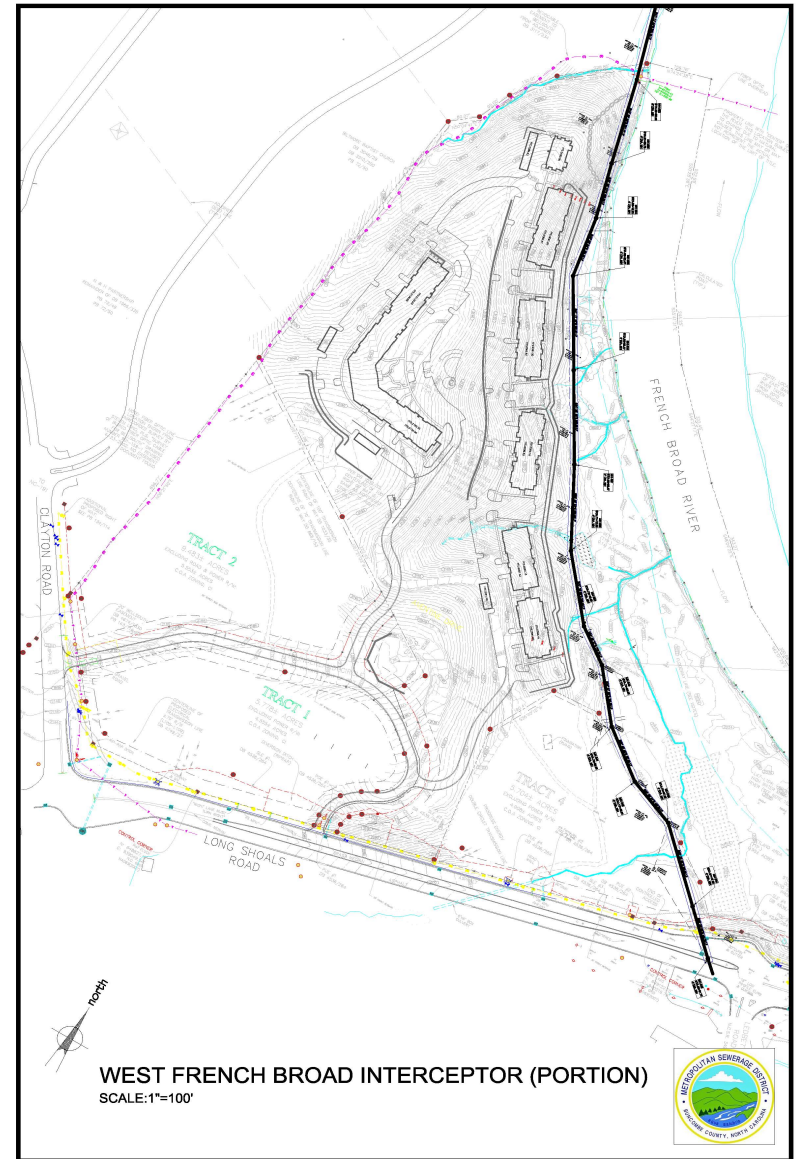
- MSD utilizes a CIP Committee comprised of representatives of all of our member agencies that makes annual recommendations to the Board regarding program priorities.
- In-house engineering staff continuously update pipe rating and other programs to improve efficiency of rehabilitation planning.
- MSD proactive cleans and performs condition assessments on over 15% of the sewer lines annually.





Economic Development Partner

- MSD provides incentives for the orderly growth of the sewer system into new areas as identified by Member Agencies and the Collection System Master Plan.
- MSD provides design services, ROW services, and financial contributions toward construction of new Master Plan lines.
- MSD also shares revenue with developers to help fund extensions.
- Economic development fee waiver
- Developer to developer reimbursements.





Governance, Management and Operations

Strategic Focus on Assets & Maintenance

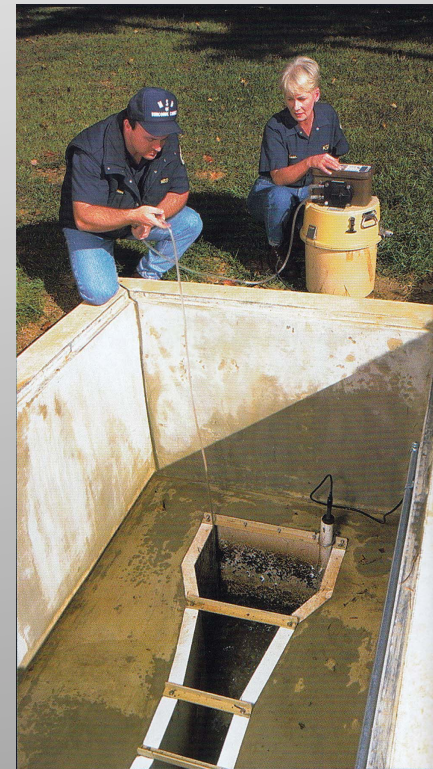
- Engaged and independent Board
- Proactive, innovative management
- Highly skilled, trained, and professionally-certified employees
- Collaborative, team-centered workplace
- Operational statistics meet or exceed comparable utilities





Environmental Protection and Regulatory Compliance

- Excellent track record with all regulatory permits. Recognized as a leader in the industry by NCDENR & NACWA.
- Dramatic reduction in Overflows due to focused CIP and preventative maintenance.
- MSD maintains an active Environmental Management System (EMS) and is ISO 14001 Certified
- Effluent from treatment plant consistently below permit limits.
- Comprehensive Water Quality monitoring in cooperation with local environmental organizations.
- Reclassification of the French Broad River from Class C to Class B – recreation.





Financial Planning Rates and Rate Structure

- The 10 year Financial Forecast serves as a business plan to provide funding for operations, debt and for the aggressive 10 year CIP.
- Affordable domestic and industrial rates
- Moderate and consistent rate increases





Financial Stability

- Debt service coverage ratios well in excess of legal minimums using recurring revenues
- Healthy ratio of cash versus debt to fund CIP program
- Moderate expenditure increases
- Adequate reserves for fleet and treatment plant equipment renovation and replacement





Conservation and Efficiency

❖ Biodiesel

- MSD became the first Public Utility in western North Carolina to use Biodiesel fuel(B20).
- All of MSD diesel powered vehicles and equipment now run on biodiesel.
- Without requiring modifications to the engines we reduce emissions by 20%
- Currently using local fryer waste provided by Blue Ridge biodiesel.

❖ Intermediate Pump Replacement

- MSD replaced its hydraulic driven Intermediate Pumps with new high efficiency electric pumps.
- The new high efficiency pumps save the District \$72,000 per year in electrical costs.

❖ Hydroelectric Facility

- Original plant built in 1903 was rebuilt in the 1980's and can generate 2880 KW.
- Typically saves the District over \$300,000 net per year in avoided power costs.



4. MSD Organization



MSD HISTORY

- MSD was formed in 1962 by State Statute as a special District with the sole purpose to collect and treat wastewater and to eliminate the direct discharges to the surrounding rivers and streams.
- Between 1962 and 1989 MSD built over 100 miles of large interceptor lines and a 25 MGD treatment plant.
- In 1968 the Treatment Plant was completed and we began treating the wastewater from the various local governments in the region. The Treatment Plant was later upgraded to a 40 MGD Plant in the mid 1990's.
- In 1990 all the local governments and special districts gave all of their collection lines to MSD for ownership and maintenance in agreements we call "Sewer Consolidation."
- MSD assumed over 720 miles of these small local collection lines which were in poor condition, many of which were installed in the 1920's.



Consolidation of Fifteen Separate Sewer Systems in 1990

Five Municipalities

- City of Asheville
- Town of Biltmore Forest
- Town of Black Mountain
- Town of Montreat
- Town Of Weaverville



Over 130,000 people

Ten Special Districts

- Beaverdam Water and Sewer District
- Busbee Sanitary Sewer District
- Caney Valley Sanitary Sewer District
- Crescent Hill Sanitary Sewer District
- Enka-Candler Water and Sewer District
- Fairview Sanitary Sewer District
- Venable Sanitary District
- Skyland Sanitary Sewer District
- Swannanoa Water and Sewer District
- Woodfin Sanitary Water and Sewer District



MSD Board of Directors

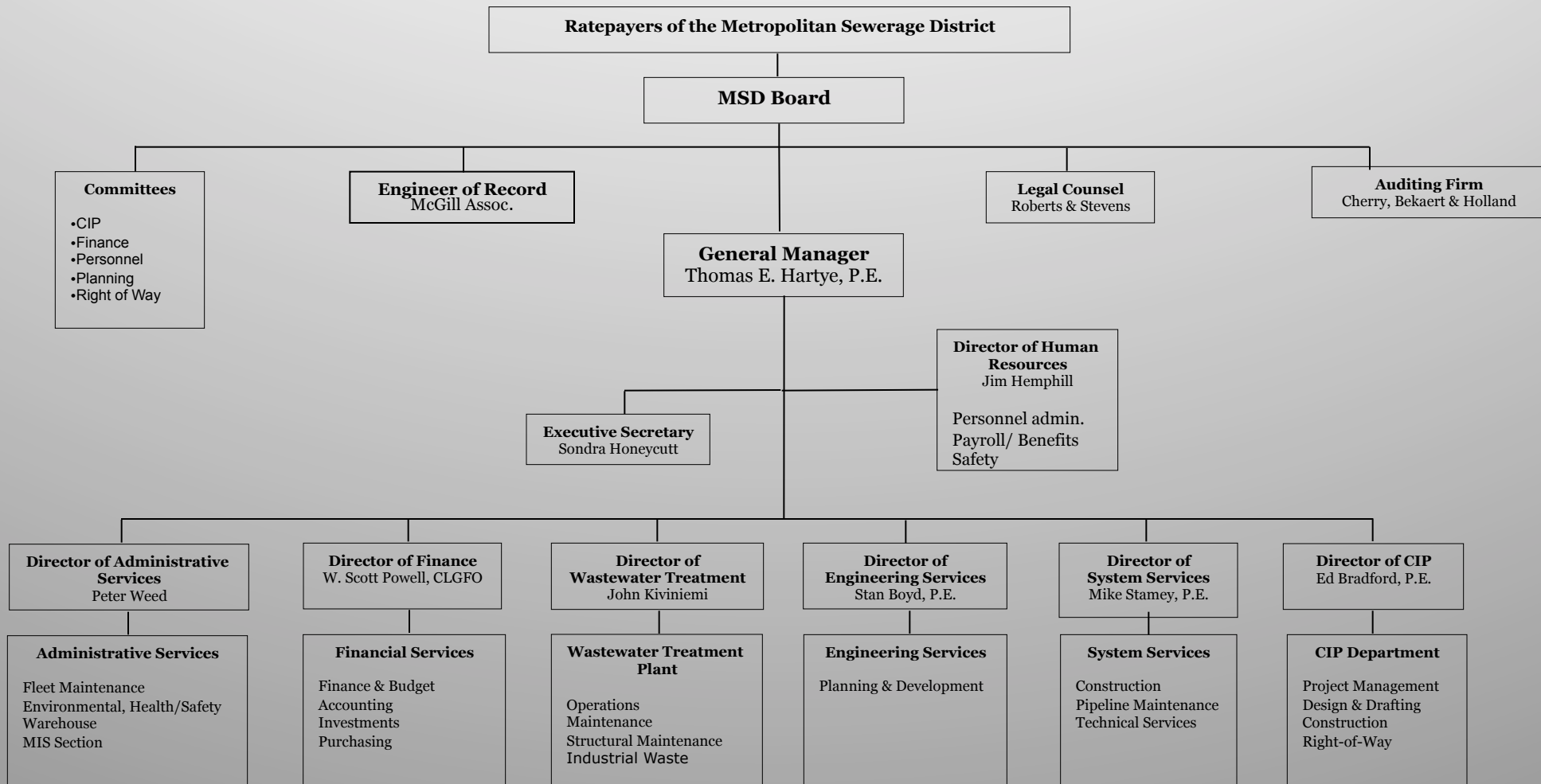
- Governed by a twelve-member Board appointed by the following entities:

City of Asheville (3)	Montreat
Buncombe County (3)	Weaverville
Biltmore Forest	Woodfin Sanitary Water and Sewer District
Black Mountain	Town of Woodfin
 - Board solely responsible for setting rates and fees for service.
 - Chairman, Vice-chairman and Secretary-Treasurer are elected annually by the Board.
 - Members serve staggered three-year terms and may be re-appointed.
 - Active subcommittees:

Capital Improvement Program	Personnel
Planning	Finance
Right of Way	
 - The Board employs a General Manager, P.E., who is responsible for managing all District operations.
-



Management Structure



Employees FY 2001-- 167

Employees FY 2011-- 150



5. MSD Operations



2009 Excellence in Management Award

from

National Association of Clean Water Agencies (NACWA)

Signifies MSD's commitment to both its customers and its employees through efficient operations, teamwork, long term planning, and effective management.





MSD: ISO 14001 Registered



- ISO 14001 Implementation Team
- Entire Organization ISO 14001 Registered encompassing Treatment Plant, Collection System, Engineering and Administration
- Largest Public Utility in NC to be registered





MSD Treatment Plant



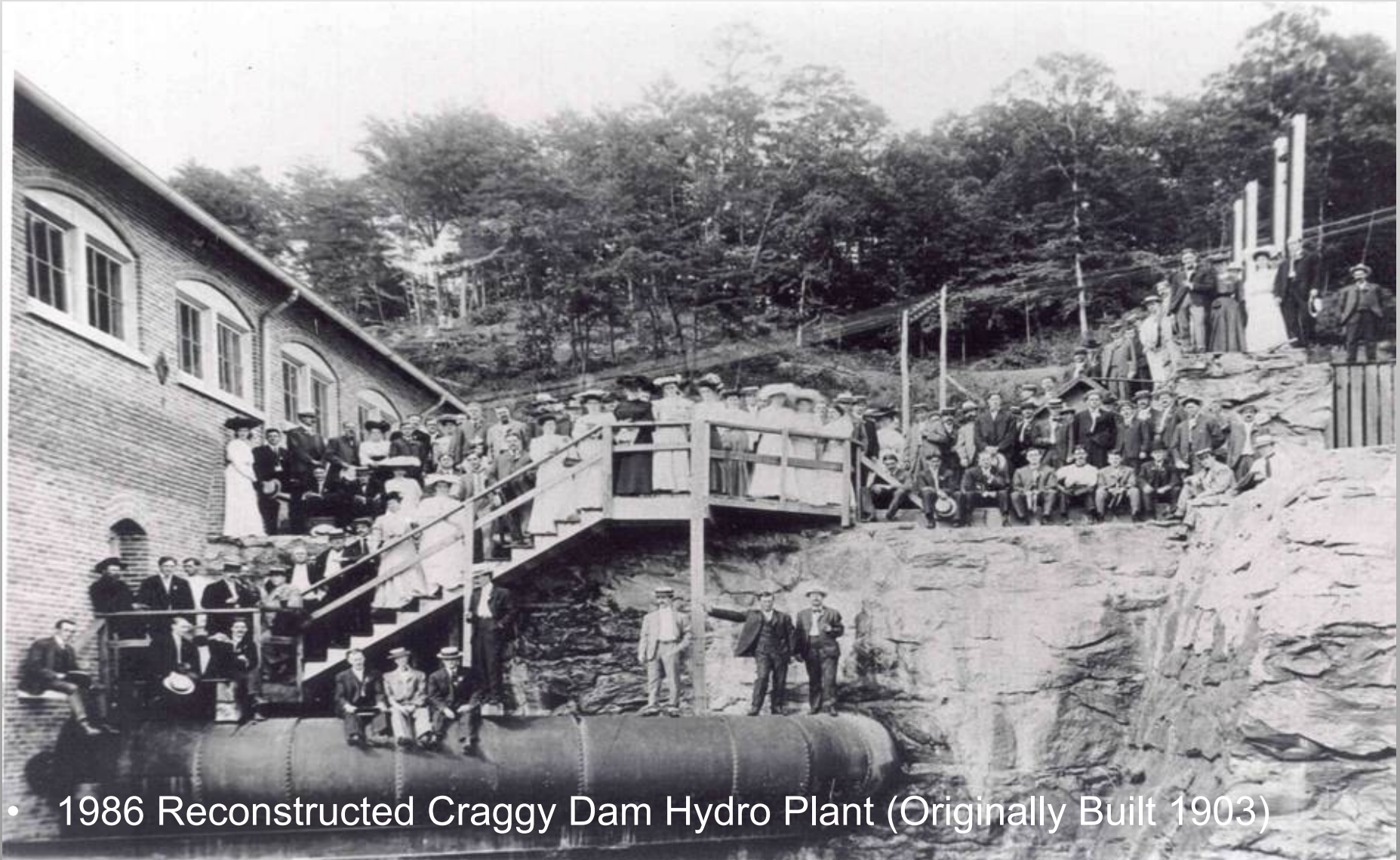


Treatment Plant

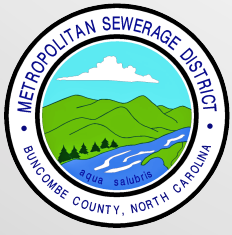
- 1995 Plant expansion to 40 MGD completed (65 MGD Peak)
- Current Average Daily Flow 18.0 MGD
- 152 Rotating Biological Contactors (RBC)—largest in world
- 2880 KW Hydroelectric Generation Facility
- 2 MW Diesel Generator Back-up (Upgrade to 4MW – 2012)
- Two 450 KW Gas Generators
- Land-fill Gas supply from closed county Landfill
- Currently Constructing New \$10 million Filters



Hydroelectric Generation Facility



- 1986 Reconstructed Craggy Dam Hydro Plant (Originally Built 1903)



Current Hydroelectric Production

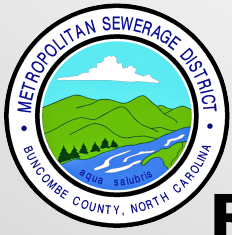


- Can Generate 2880 KW
- FY 2011 Avoided Power Cost \$311,388.

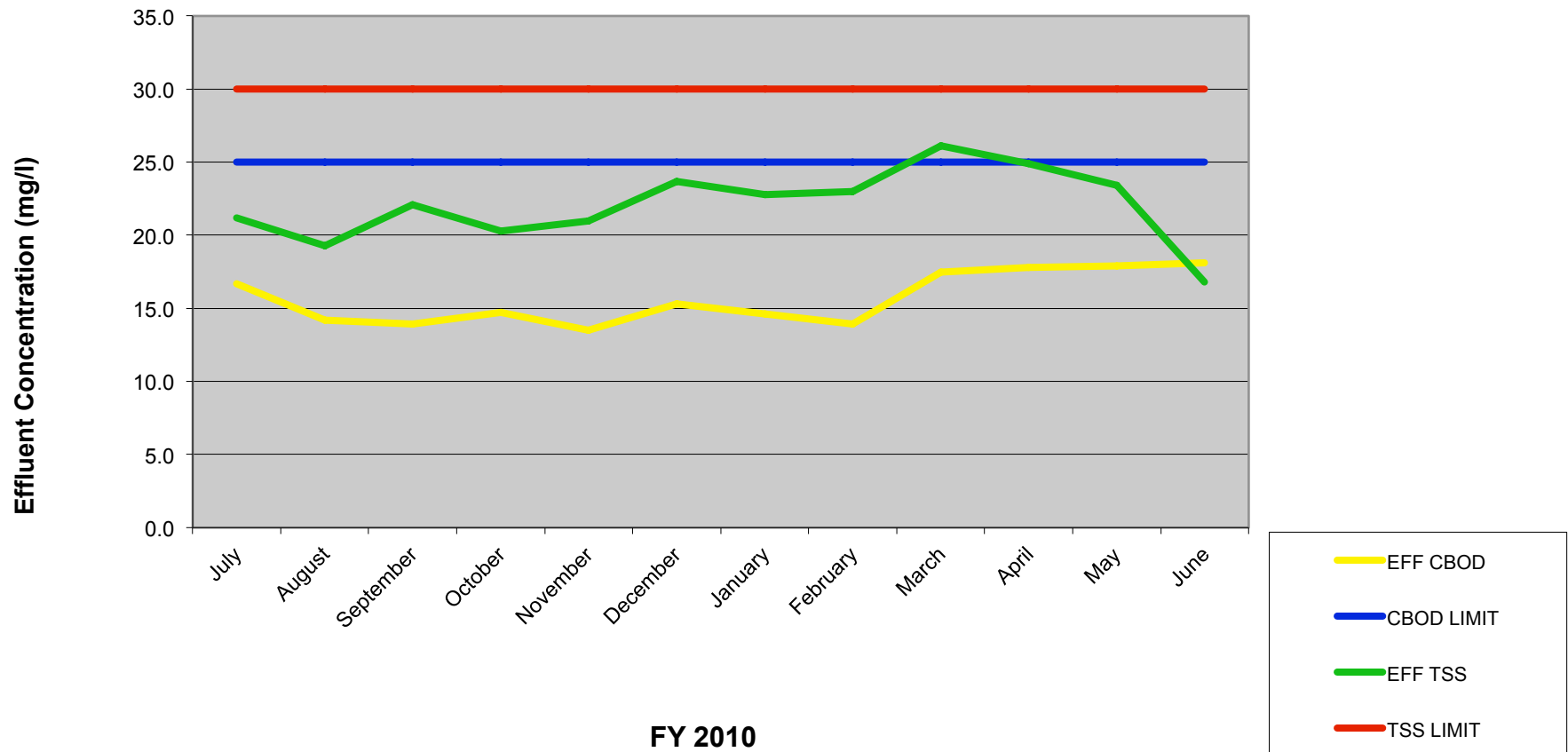


High Training Level for Wastewater Treatment Plant Operators

Treatment Plant Operators	Total at 7/01/2009	
Grade II (Minimum required)	0	
Grade III	0	
Grade IV (Maximum)	11	100%
Total	11	100.0%



Regulatory Compliance at the Treatment Plant





Treatment Plant Receives NACWA Platinum 7 Award

- **Platinum Peak Performance**
 - Seven consecutive years for excellence in wastewater treatment





Emphasis on Training in Systems Services Division

Wastewater Collection Systems

**Total at
7/01/2011**

No Certification	16	28.1%
Grade I	2	3.5%
Grade II	10	17.5%
Grade III	4	7.0%
Grade IV	25	43.9%
	57	100.0%

Note: State Certification only required for Operator in Responsible Charge



Partnerships

Public

- Water /sewer project coordination: Coordinate projects to reduce paving restoration as well as to cost share.
- Partnering with the City of Asheville for pavement restoration services.
- Revenue Sharing for sewers run by Member agencies.
- Emergency Response Services – Marshall , Madison, Tuckeseegee, CCWSD, Woodfin, Lake lure , Franklin etc..
- Disposal of Water Plant Sludge – COA



Cane Creek Water and Sewer District (CCWSD)

Agreement

- MSD has an Agreement with CCWSD to provide Treatment Services for up to 1.35 MGD of wastewater from CCWSD.
- CCWSD's current Average Daily Flow is approximately 0.7 MGD.
- CCWSD Master Plan/Basin Study identified a Future build-out flow of 3.0 MGD.
- MSD has preliminarily proposed to update the existing agreement to provide for the 3.0 MGD with a 7.5 MGD instantaneous peak.



Partnerships

Private

- WFB Interceptor – Biltmore Farms LLC
- Reems Creek Interceptor – Windsor/Aughtry
- Cooking oil recycle program – Blue Ridge Biofuels
- Cost Sharing of sewer extensions



6. Capital Improvement Program



Capital Improvement Plan

Background

- A Capital Improvement Program Committee comprised of representatives of all of our member agencies makes annual recommendations to the Board regarding program priorities.
- The District has replaced or rehabbed nearly 20% of the entire system and is implementing a long term asset management plan to rehab or replace a little over 1% of the system per year which translates to a little over 50,000 feet each year.
- Since Consolidation in 1990 the District has spent \$276 Million on Capital Improvement Program \$243 million for replacing and rehabbing sewer lines and \$33 million on rehabilitation of the Treatment Plant and general infrastructure.



Master Planning Efforts Form Capital Improvement Program

- **2001 Master Plan** – Camp, Dresser & McKee (CDM): Collection, Treatment, and Operations.
 - ✓ Management, Operations and Maintenance
 - ✓ Sewer Rehabilitation Program
 - ✓ Capacity Improvements for wet and dry flows
- **2007 Facilities Plan** – CDM: Detailed look at the Treatment Plant
 - ✓ Grit and Grease upgrade
 - ✓ Intermediate Pump Replacements
 - ✓ Secondary Microscreen Replacements
- **2008 Collection System Master Plan** – McGill & Assoc.:
 - ✓ Incorporated new Buncombe County Land Use Plan and Zoning Ordinance
 - ✓ Incorporated all member agency planning/zoning efforts
 - ✓ Plan for orderly growth of sewer system
 - ✓ Replacement of existing sewers sized for future growth



CAPITAL IMPROVEMENT PROGRAM

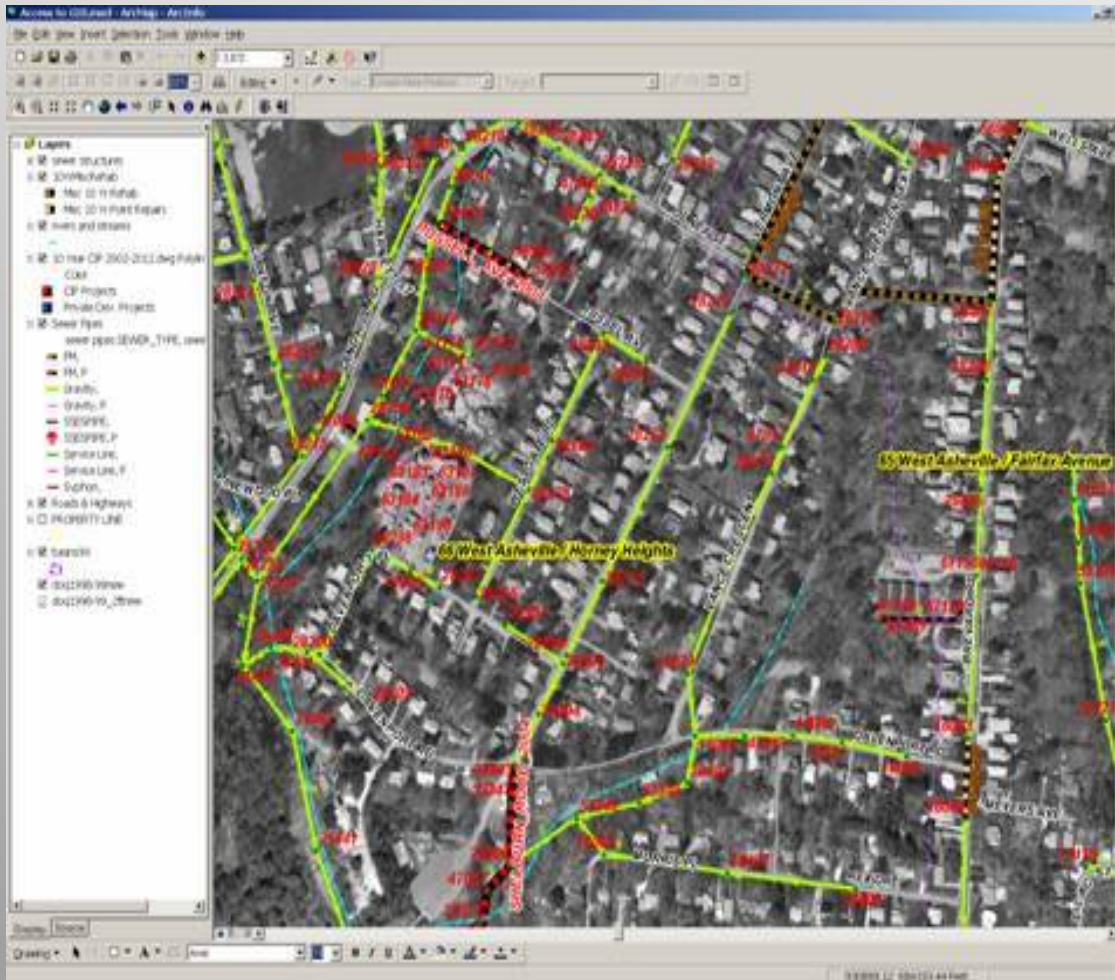
FY12 through FY21 (10 years)

Interceptors/Wet Weather Rehab.	\$ 16.1 Million (11%)
Collection Rehabilitation	\$112.2 Million (76%)
Treatment Plant / P.S.	\$ 18.2 Million (12%)
Reimbursements	<u>\$ 2.0 Million (1%)</u>
Total	\$148.6 Million

Since Consolidation in 1990 the District has spent \$276 Million on Capital Improvement Program.



Pipe Rating Program



- Proactive program to focus rehabilitation dollars where most needed
- Featured in February 2004 issue of “Water Environment & Technology” magazine
- Developed by interdepartmental team using off-the-shelf software

Line cleaning and CCTV & Defect Coding



GIS Capabilities



Beaver Lake
Man Hole Inspection



Variety of Information
LINKED TO MAPPING

Video

CCTV, Defects, SSO's, Work Orders

Microsoft Access

File Edit View Insert Format Records Tools Window Help

pipe score 4in 97 format : Database

Tables Queries Forms Reports Macros Modules

select form view of pipe scoring

Open Design New

select form view of pipe scoring

PipeID	Mean Pipeline score	Mean Defect score	Peak Defect
24860	9.2647	45	45


Length	Slope	UPMHNO	DSMHNO
34	0.076516	26507	26506

Pipe Video hyperlink
\\Video_server\Video\Basin47\26507 to 26506.mpg

Drain_B Royal Pines

Basin #: 47

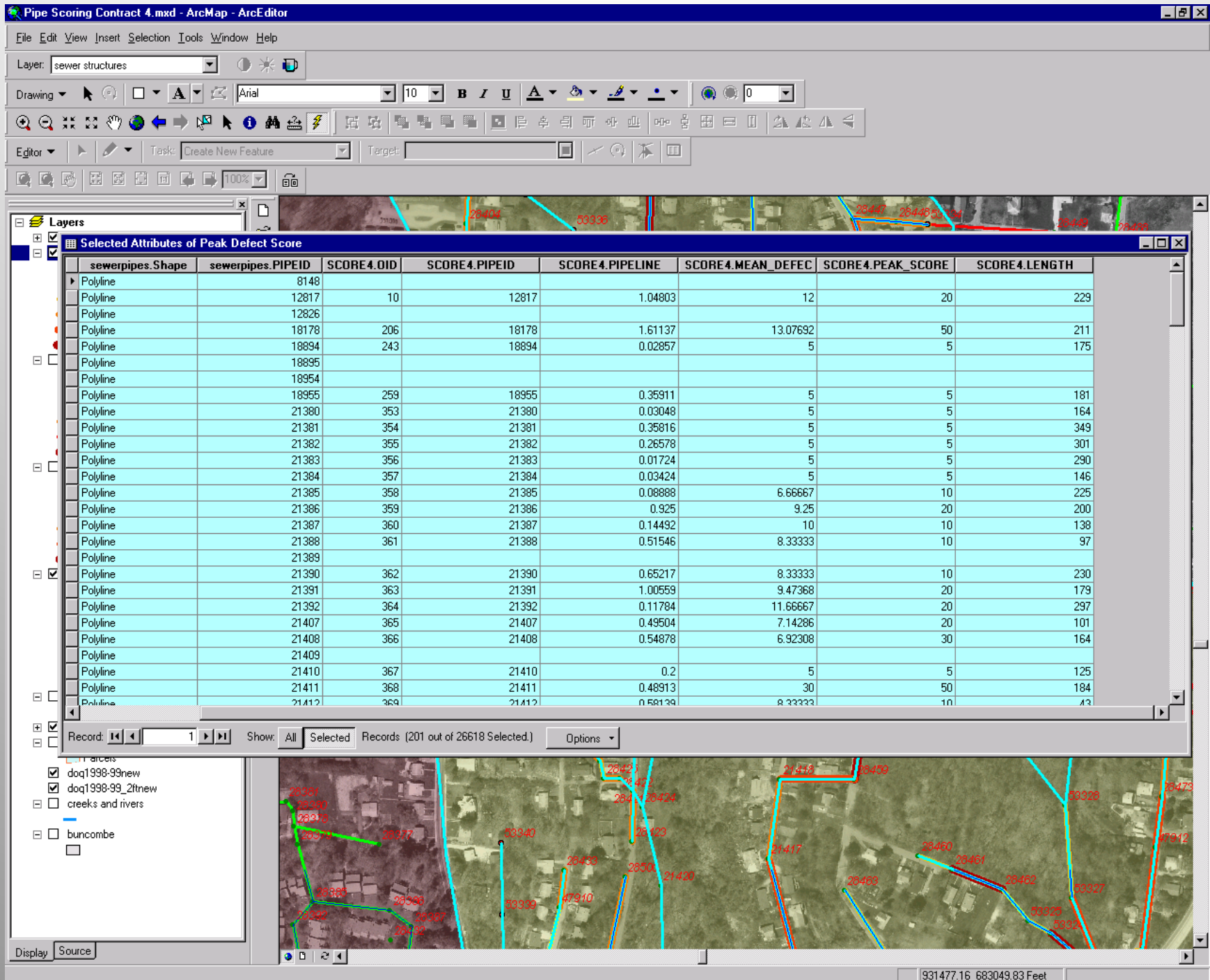
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NUM



Pipe Rating Program



Proactive program to focus rehabilitation dollars where most needed



AMSA Award for Pipe Rating Project

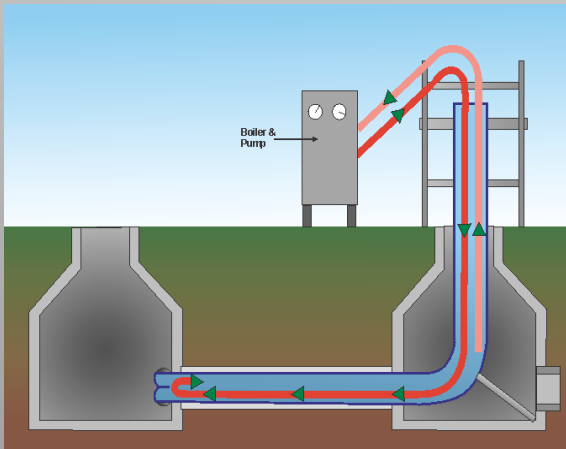
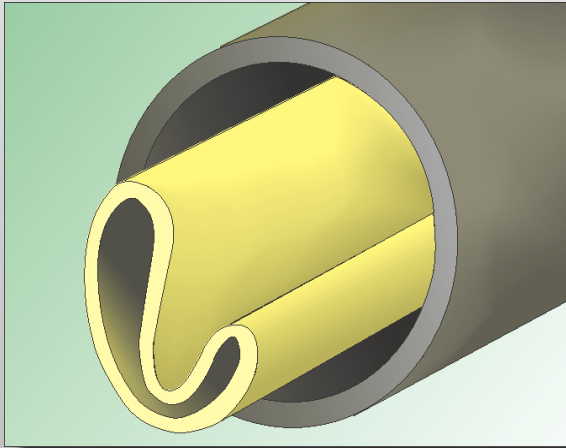


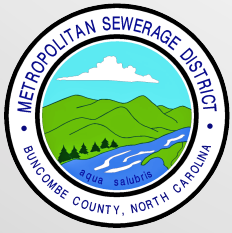
- In May of 2003, MSD received an AMSA National Environmental Achievement Award for the Pipe Rating Program
- Developed in-house with a vertical team using off-the-shelf software
- MSD and Los Angeles only two US utilities to receive this award



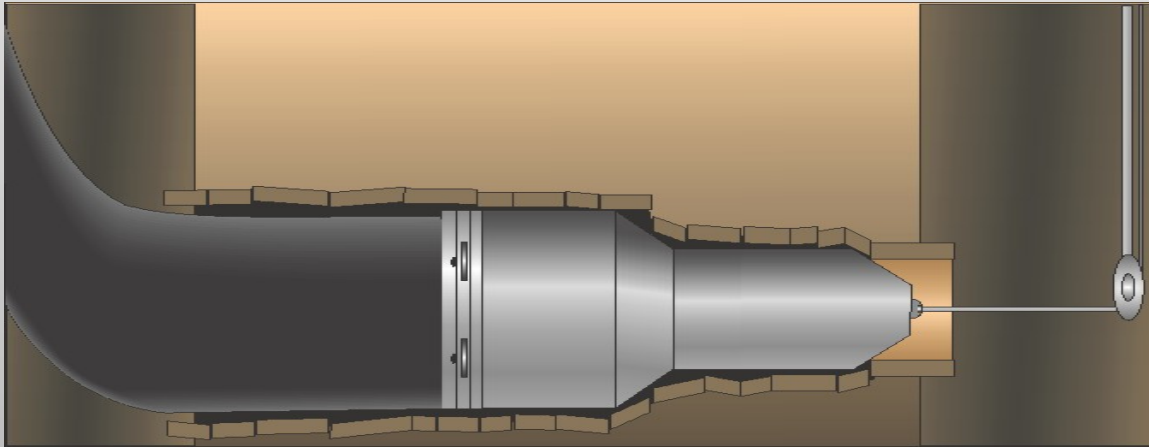


Trenchless Technologies Pipe Lining





Trenchless Technologies Pipe Bursting

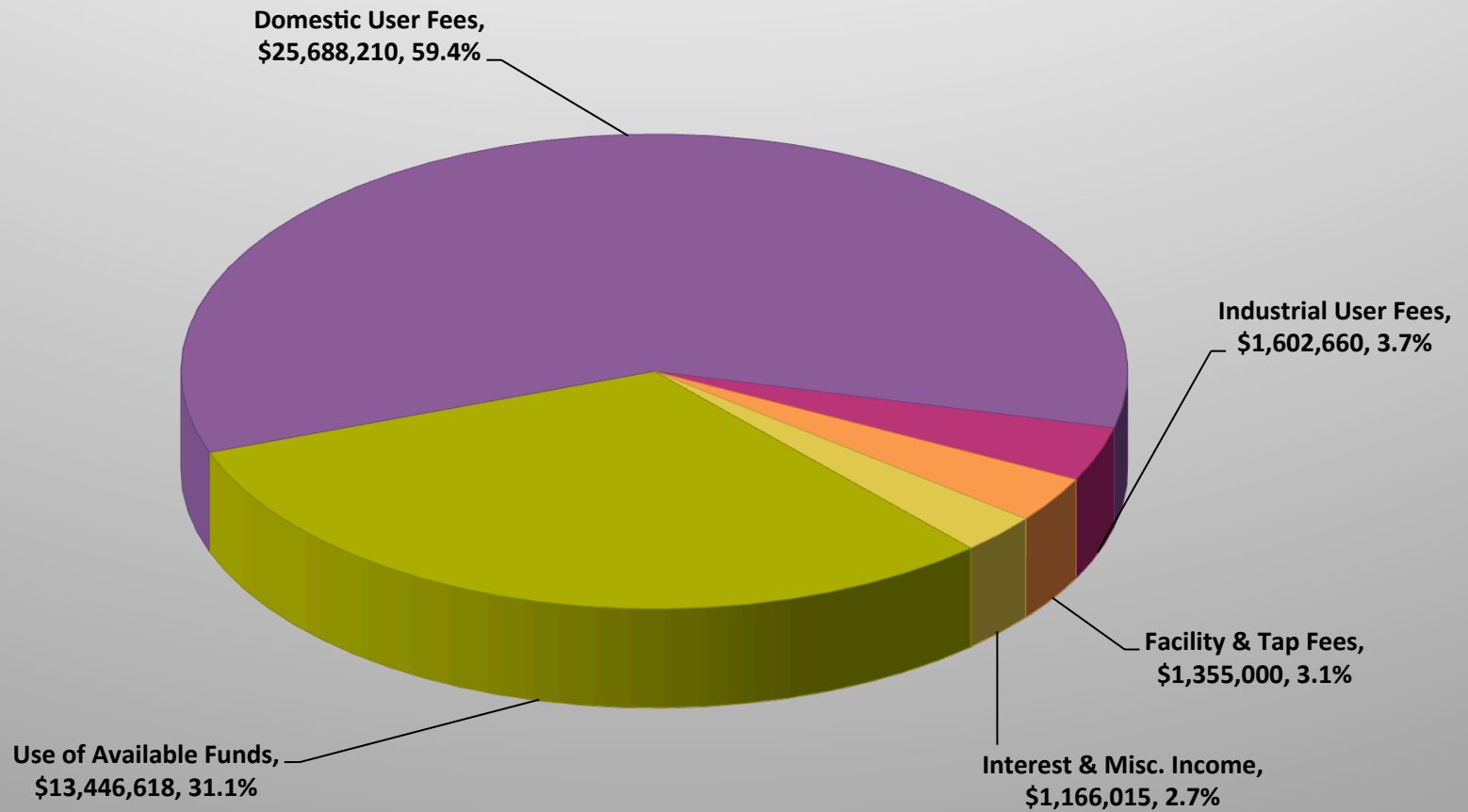




7. Financial Overview of the District

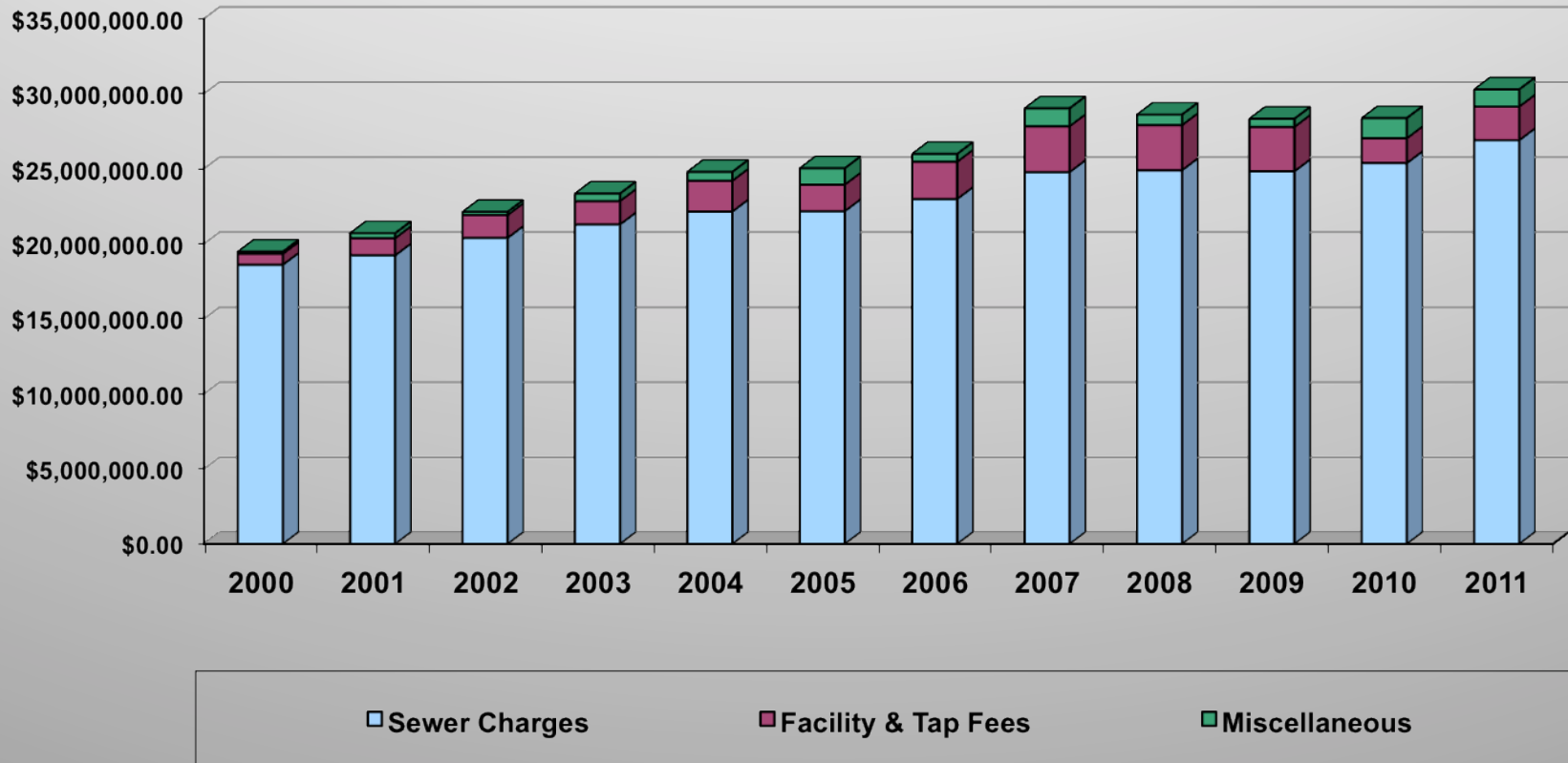


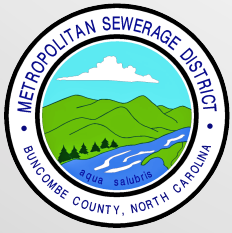
FY 12 Budgeted Revenues \$43,258,503



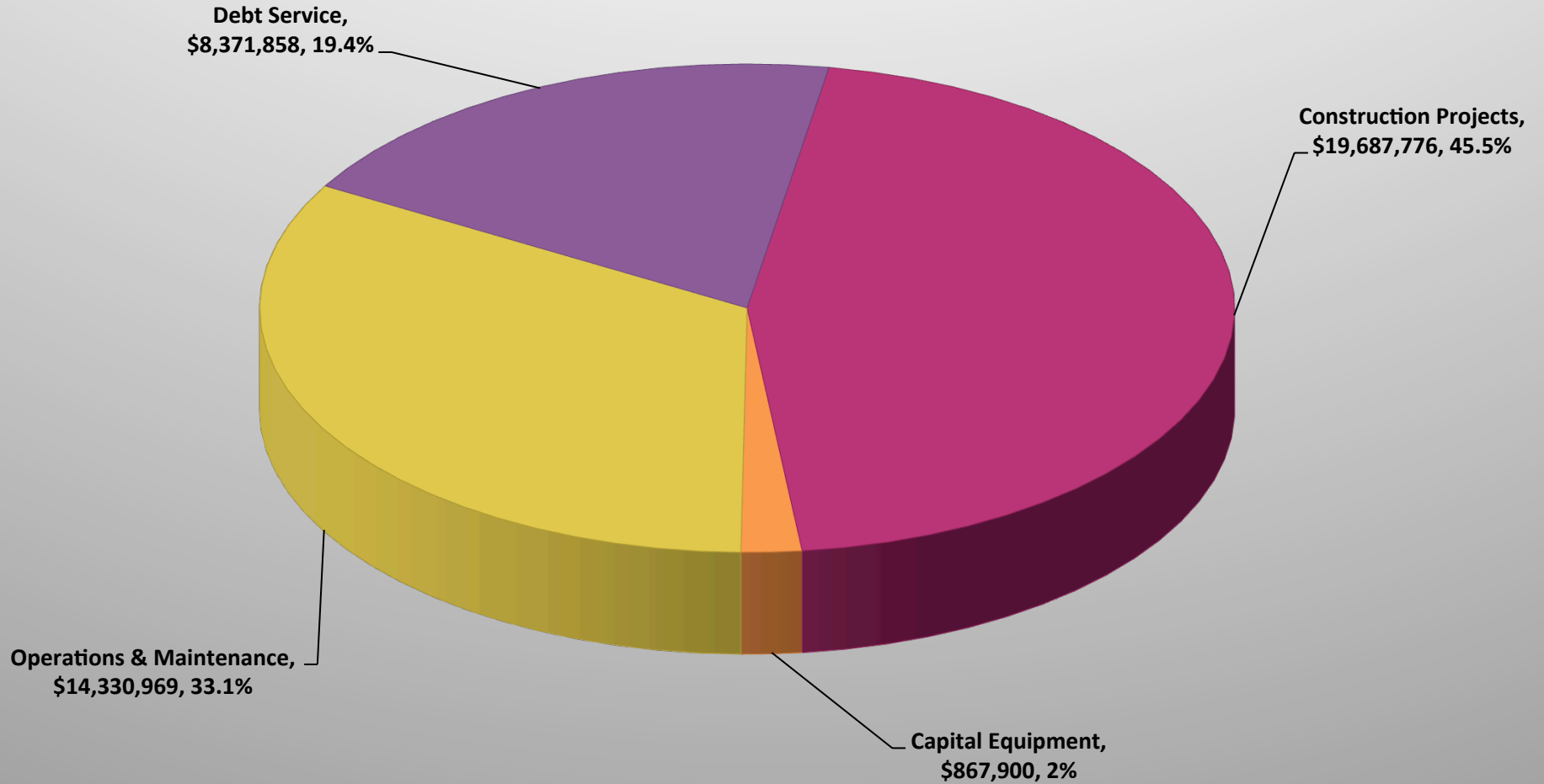


MSD Revenues



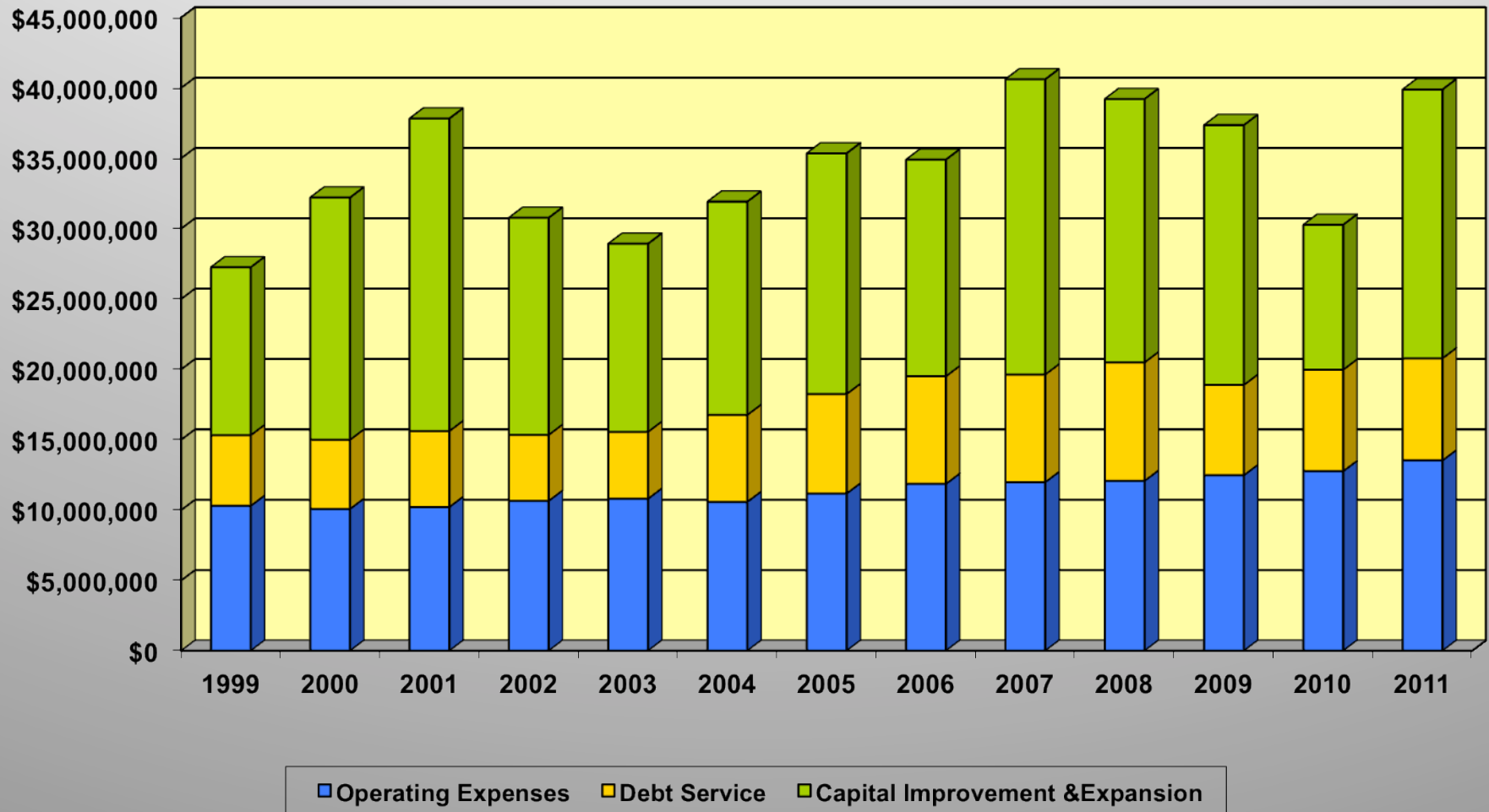


FY 12 Budgeted Expenditures \$43,258,503





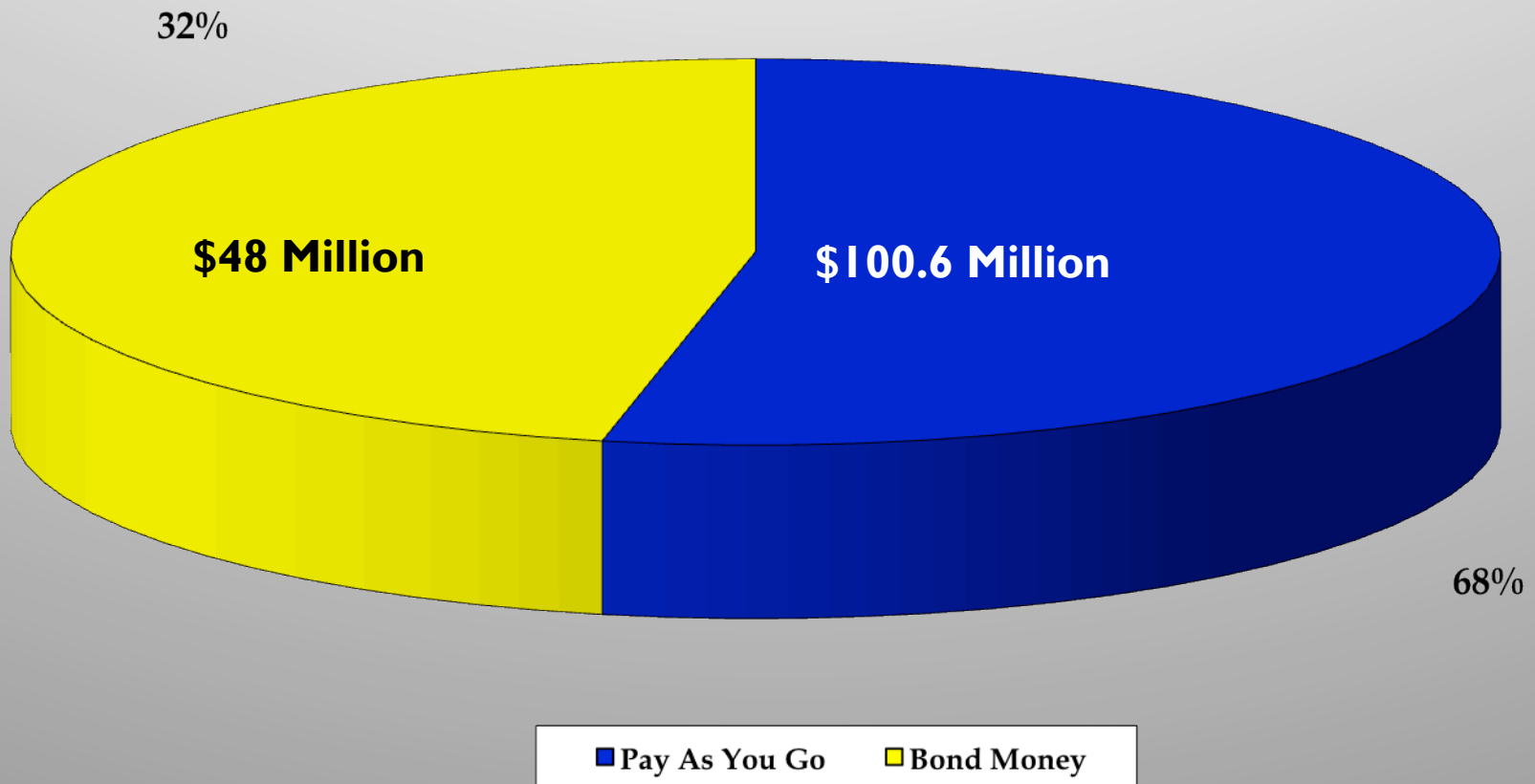
MSD All Expenditures





Capital Improvements and Sources of Funding FY 2012 to FY 2021

\$148.6 Million





Current Debt

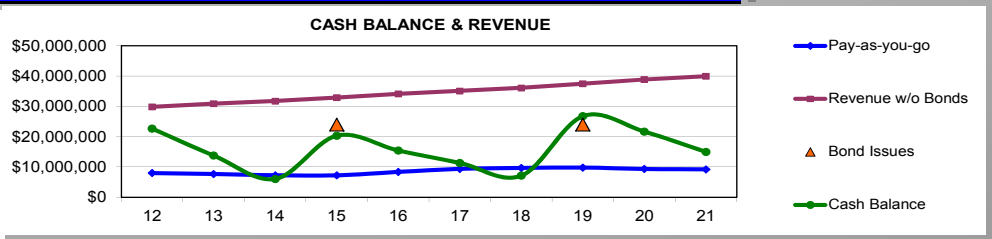
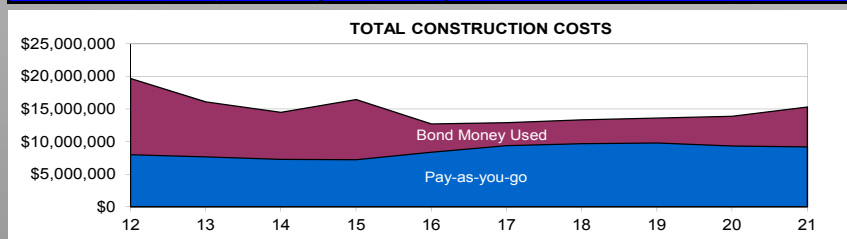
- At June 30, 2011 the District had \$101,533,665 in par value of outstanding revenue bonds.
- Unlike Cities and Counties, the District does not have a debt limit. However, the District's Bond Order requires that user rates be set to achieve a minimum debt service coverage ratio of 1.2 annually. The District's internal goal for coverage is 1.5, which we have been able to meet on a consistent basis.
- The District holds a Aa2 rating from Moody's Investor Service, a AA rating from Standard & Poor's, and a AA+ rating from Fitch. These high ratings allow the District to pay a lower rate of interest than other entities with less favorable ratings.



MSD Business Plan

Future Projection

Business Plan for Future Performance	3.0%	3.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	Sewer Rate Increase
	\$26.45	\$27.24	\$27.92	\$28.62	\$29.34	\$30.07	\$30.82	\$31.59	\$32.38	\$33.19	Average Monthly Bill
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Assumptions
July 1- Available for Construction	34,698,658	22,657,732	13,769,098	6,051,624	20,331,642	15,428,070	11,339,040	7,125,412	26,751,082	21,655,875	Minimum Carry-over for Construction \$3,000,000
REVENUE:		3.8%	3.3%	3.3%	3.4%	3.3%	3.3%	3.2%	3.4%	3.2%	Consumption and Account Growth
Domestic Users	25,595,084	26,574,625	27,438,380	28,316,535	29,265,104	30,229,442	31,209,834	32,206,573	33,277,399	34,366,038	0.5% Increase in FY11 0.75% Increase in FY12 0.75% Increase thereafter
Industrial Users (No growth)	1,602,660	1,667,909	1,735,669	1,807,011	1,880,860	1,957,238	2,038,005	2,121,143	2,207,957	2,263,156	No growth in Industries - Rate Parity for Flow in 2020
Billing and Collections (User Fee)	652,913	672,500	692,675	713,456	734,859	756,905	779,612	803,001	827,091	851,903	
Tap Fees	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	
Facility Fees	1,250,000	1,287,500	1,325,000	1,362,500	1,400,000	1,437,500	1,475,000	1,512,500	1,550,000	1,587,500	
Interest & Non-operating Revenues	430,173	364,268	247,759	395,749	536,396	401,507	276,967	508,147	726,104	549,324	
City of Asheville (annex.-Enka)	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	
Rental Income	67,872	67,872	68,597	68,742	69,950	71,399	71,641	71,641	71,641	71,641	
Transfer from Reserves (to / from)	0	0	0	0	0	0	0	0	0	0	
Miscellaneous	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	
Total Revenues	29,815,702	30,851,674	31,725,080	32,880,993	34,104,169	35,070,991	36,068,059	37,440,005	38,877,192	39,906,562	
State and Federal (EPA) Grants											
Revenue Bonds/Stimulus				24,000,000				24,000,000			
Total Funds Available	64,514,360	53,509,407	45,494,178	62,932,617	54,435,810	50,499,061	47,407,099	68,565,417	65,628,274	61,562,437	
EXPENSES:											
Operations & Maintenance	14,005,401	14,568,718	15,257,154	15,859,498	16,482,257	17,042,747	17,732,306	18,458,735	19,224,321	19,801,051	
Replacement Funds (WRF & Fleet)	350,000	450,000	500,000	500,000	550,000	550,000	550,000	550,000	550,000	550,000	
Debt Service	7,813,451	8,616,358	9,188,057	9,784,669	9,259,239	8,649,605	8,647,377	9,190,832	10,307,898	10,916,435	
CIP (including Bond Projects)	19,687,776	16,105,233	14,497,343	16,456,808	12,716,244	12,917,669	13,352,004	13,614,768	13,890,180	15,329,202	
Total Expenses	41,856,628	39,740,309	39,442,554	42,600,975	39,007,740	39,160,021	40,281,687	41,814,335	43,972,399	46,596,688	
June 30 - Carry over for Construction		10,769,098	10,769,098	20,331,642	10,769,098	10,769,098	7,125,412	20,751,082	14,500,000	14,500,000	
Pay-as-you-go (Current Revenue only)	7,996,850	7,666,598	7,279,869	7,236,826	8,362,673	9,378,639	9,688,376	9,790,438	9,344,973	9,189,076	
Debt Coverage (User Fees only)	1.8	1.7	1.6	1.5	1.7	1.9	1.9	1.8	1.7	1.6	
Debt Coverage with Total Revenue	2.0	1.9	1.8	1.7	1.9	2.1	2.1	2.1	1.9	1.8	
November 1, 2011											
Active Plan CIP	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	
Interceptor/Wet Weather Rehabilitation	1,804,380	44,075	940,191	2,257,304	17,469	1,112,634	2,057,621	1,589,554	0	2,874,790	
General Sewer Rehabilitation	4,975,184	9,603,594	6,984,287	7,158,304	7,845,568	6,974,729	6,332,299	6,927,188	8,651,802	7,207,490	
Pipe Rated Projects	1,324,312	983,419	2,629,657	883,896	1,270,549	1,311,956	1,358,400	1,406,487	1,456,277	1,507,829	
Unclaimed Sewer Rehabilitation	340,900	88,423	113,102	117,105	124,124	124,948	129,371	133,951	138,693	143,603	
Treatment Plant / Pump Stations	7,020,000	2,386,597	826,553	2,968,150	316,057	178,497	184,816	191,359	198,133	68,382	
Engineering Force Account	3,023,000	2,799,125	2,803,553	2,872,049	2,942,477	3,014,905	3,089,497	3,166,229	3,245,275	3,327,108	
Reimbursements	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	
Contingency	1,000,000										
Capital Improvement Program Totals	19,687,776	16,105,233	14,497,343	16,456,808	12,716,244	12,917,669	13,352,004	13,614,768	13,890,180	15,329,202	

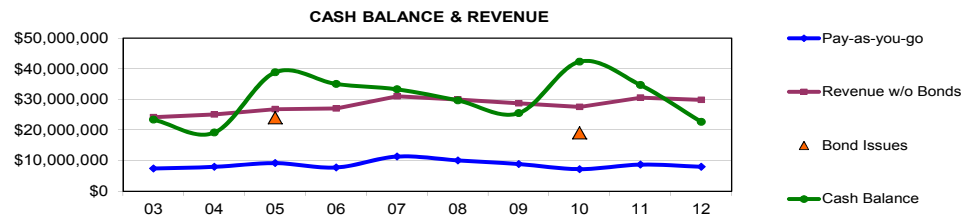
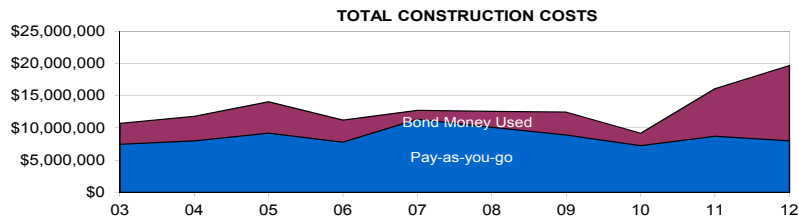




MSD Business Plan

Past Performance

Business Plan for Past Performance	2.5%	2.0%	2.0%	3.0%	4.5%	4.0%	3.0%	3.75%	3.5%	3.0%	Sewer Rate Increase
	\$20.04	\$20.43	\$20.83	\$21.45	\$22.41	\$23.28	\$23.99	\$24.84	\$25.72	\$26.45	Average Monthly Bill
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Assumptions
July 1- Available for Construction	25,403,540	23,375,238	19,824,646	38,827,187	35,046,692	32,628,926	29,669,151	25,496,310	42,331,200	34,698,658	Minimum Carry-over for Construction \$3,000,000
REVENUE:	4.3%	4.1%	-0.1%	3.6%	7.8%	0.4%		4.5%	6.1%		Consumption and Account Growth
Domestic Users	17,666,582	18,824,390	18,757,943	19,840,872	21,523,457	22,800,471	22,284,340	23,242,077	24,686,228	25,595,084	0.5% Increase in FY11
Industrial Users (No growth)	3,169,870	2,858,675	2,912,188	2,617,298	2,693,328	1,510,669	1,386,132	1,498,529	1,565,445	1,602,660	0.75% Increase in FY12
Billing and Collections (User Fee)	456,701	463,606	499,450	522,799	554,317	584,554	620,247	629,212	643,264	652,913	0.75% Increase thereafter
Tap Fees	1,557,990	2,050,380	177,000	199,600	203,370	333,185	281,830	278,100	211,165	105,000	No growth in Industries - Rate Parity for Flow in 2020
Facility Fees			1,592,620	2,282,250	2,851,580	2,671,999	2,677,285	1,375,910	2,027,006	1,250,000	
Interest & Non-operating Revenues	815,639	447,907	936,448	1,520,926	2,582,983	1,792,514	817,650	457,815	383,248	430,173	
City of Asheville (annex.-Enka)	87,176	87,754	88,217	37,003	37,003	37,003	37,003	37,003	37,085	37,000	
Rental Income	61,138	58,738	56,536	58,056	37,578	16,560	16,560	16,560	20,507	67,872	
Transfer from Reserves (to / from)	351,791		1,773,190	(51,926)	500,980	171,411	449,370	0	0	0	
Miscellaneous		266,412	828	2,689	4,324	0	113,246	10,651	963,957	75,000	
Total Revenues	24,166,887	25,057,862	26,794,420	27,029,567	30,988,920	29,918,366	28,683,663	27,545,857	30,537,906	29,815,702	
State and Federal (EPA) Grants	1,419,900		396,484								
Revenue Bonds/Stimulus			24,000,000					19,072,980			Bond Issues figured at: 5.0% yield FY15 5.5% yield FY18
Total Funds Available	50,990,327	48,433,100	71,015,550	65,856,754	66,035,612	62,547,292	58,352,814	72,115,147	72,869,106	64,514,360	
EXPENSES:	-2.6%										3% inflation in O & M, Replacement Funds and Engineering Force Account
Operations & Maintenance	10,287,499	10,474,414	10,856,532	11,264,280	11,584,471	11,754,849	12,408,349	12,454,727	13,272,468	14,005,401	ENR 10-year Construction Index @ 3.54%
Replacement Funds (WRF & Fleet)	200,000	400,000	400,000	350,000	360,000	400,000	400,000	300,000	250,000	350,000	General Sewer Rehab to cover 50,000 lineal ft / year
Debt Service	6,431,907	6,603,923	6,876,240	7,982,730	8,068,069	8,167,726	7,600,364	7,855,989	8,565,201	7,813,451	Target Debt Coverage 1.5
CIP (including Bond Projects)	10,695,683	11,787,681	14,055,591	11,213,052	12,732,294	12,555,566	12,447,791	9,173,231	16,082,779	19,687,776	
Total Expenses	27,615,089	29,266,018	32,188,363	30,810,062	32,744,834	32,878,141	32,856,504	29,783,947	38,170,448	41,856,628	
June 30 - Carry over for Construction	25,375,238	19,824,646	38,827,187	35,046,692	32,628,926	29,669,151	25,496,310	42,331,200	34,698,658		
Pay-as-you-go (Current Revenue only)	7,447,481	7,979,526	9,196,773	7,782,557	11,336,380	10,090,081	8,900,674	7,235,141	8,700,237	7,996,850	
Debt Coverage (User Fees only)	1.8	1.8	2.0	1.5	1.8	1.7	1.6	1.7	1.6	1.8	
Debt Coverage with Total Revenue	2.1	2.2	2.3	2.0	2.4	2.2	2.1	1.9	2.0	2.0	
November 1, 2011											
Active Plan CIP	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	
Interceptor/Wet Weather Rehabilitation	3,271,638	3,352,541	3,276,859	1,865,344	2,854,467	2,728,304	3,257,084	1,391,413	3,496,305	1,804,380	
General Sewer Rehabilitation	4,700,743	3,382,386	5,717,533	5,412,255	4,440,282	4,931,934	4,885,626	3,433,233	5,109,985	4,975,184	
Pipe Rated Projects		378,031	200,239	523,767	1,480,094	1,259,217	610,703	728,835	806,840	1,324,312	
Unclaimed Sewer Rehabilitation	93,525	49,741	229,685	101,076	211,442	104,934	101,784	12,171	134,473	340,900	
Treatment Plant / Pump Stations	521,819	2,447,255	2,226,012	1,240,500	951,489	1,364,152	1,119,623	993,867	3,496,305	7,020,000	
Engineering Force Account	1,954,996	1,839,488	2,011,668	2,024,166	2,160,194	2,062,090	2,269,403	2,547,454	2,635,451	3,023,000	
Reimbursements	152,962	338,239	393,595	45,944	634,326	104,935	203,568	66,258	403,420	200,000	
Contingency										1,000,000	
Capital Improvement Program Totals	10,695,683	11,787,681	14,055,591	11,213,052	12,732,294	12,555,566	12,447,791	9,173,231	16,082,779	19,687,776	





MSD Fixed Asset Values

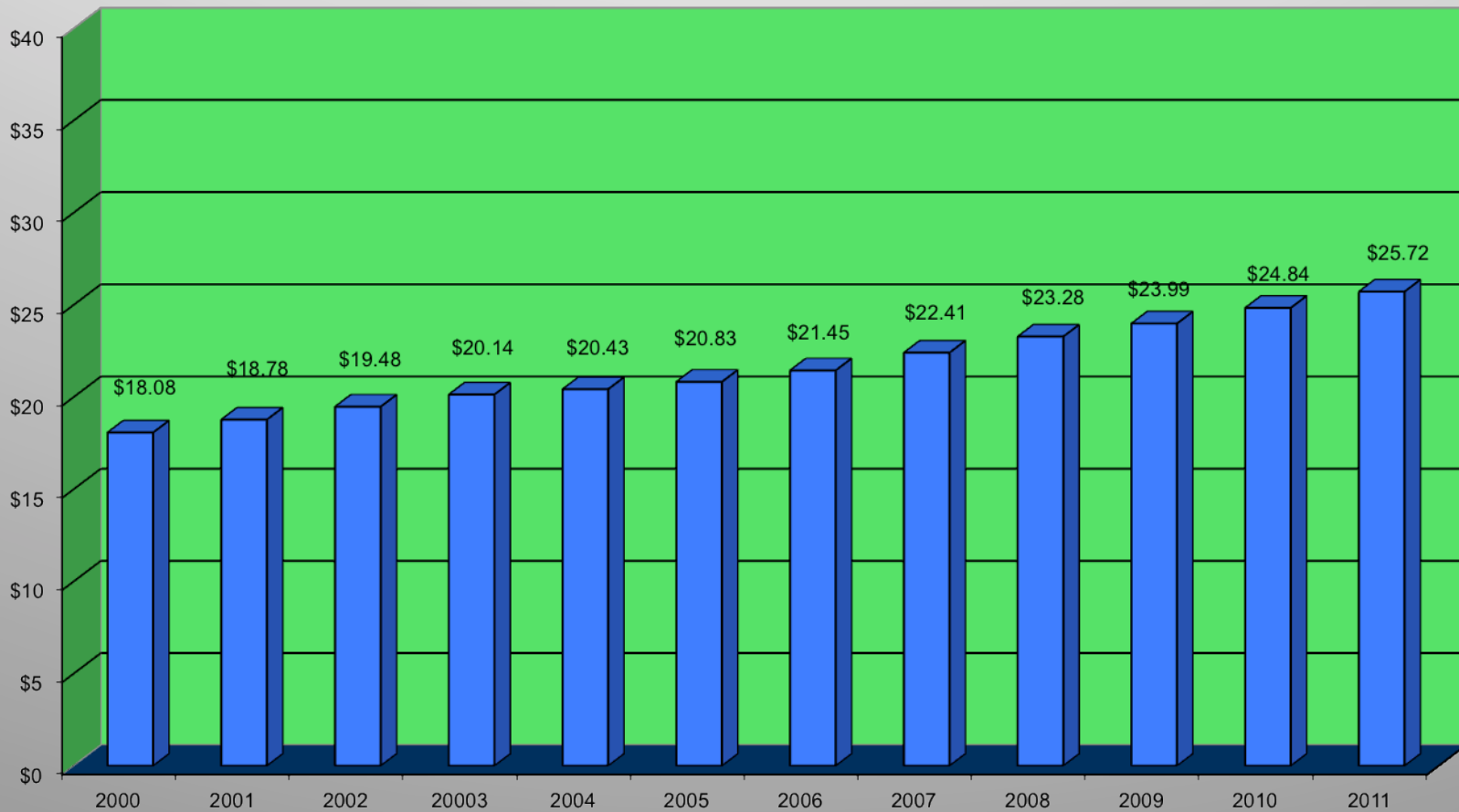
June 30, 2011

<u>Asset</u>	<u>Acquisition Cost</u>	<u>Current "Book" Value</u>	<u>Replacement Value</u>
Collection System	\$361,526,234	\$294,797,955	\$878,509,940
Buildings	49,041,068	31,256,419	85,901,224
Improvements	4,149,045	1,535,676	7,859,674
Mechanical	50,270,855	9,616,389	80,418,515
Vehicle	4,079,782.88	984,435.01	5,063,365.61
Office & Computer Equipment	1,157,032.12	135,827.07	1,503,600.56
Land & Easements	8,576,857	8,576,857	11,969,752
	<u>\$478,800,874</u>	<u>\$346,903,558</u>	<u>\$1,071,226,071</u>



Average Monthly Domestic Bill

Average 5 CCF

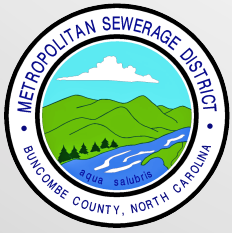




Member Agencies Monthly Bill Comparison FY 2012

	Average Residential Meter Size	Average Monthly Consumption (CCF's)	Average Water Bill	Average Sewer Bill	Average Monthly Combined Bill
Asheville Water	5/8"	5	\$25.67	\$26.45	\$52.12
Biltmore Forest	5/8"	5	\$29.37	\$26.45	\$55.82
Black Mountain	5/8"	5	\$25.55	\$27.52	\$53.07
Montreat	3/4"	5	\$29.77	\$30.25	\$60.02
Weaverville	5/8"	5	\$25.35	\$27.52	\$52.87
Woodfin	5/8"	5	\$19.98	\$26.45	\$46.43
Weighted Averages			Water \$25.46	Sewer \$26.60	

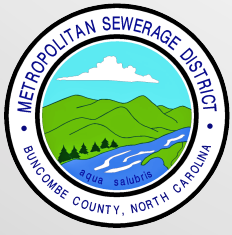
***Average sewer bill is currently 5% greater than local area water bills.
The National average residential sewer bills are typically from 19% to 21% greater than water
according to NCLM and AWWA surveys.**



Financial Reporting Awards

- GFOA Excellence in Financial Reporting for CAFR 1995-2010
- GFOA Distinguished Budget Presentation Award FY 1999-2011





Our End Product



Questions ?